



Department of Transportation

National Highway Traffic Safety Administration

[Docket No. NHTSA-2012-0006; Notice 2]

General Motors, LLC, Grant of Petition for
Decision of Inconsequential Noncompliance

AGENCY: National Highway Traffic Safety Administration, DOT

ACTION: Grant of Petition

SUMMARY: General Motors, LLC (GM), has determined that certain model year 2012; Cadillac SRX, Chevrolet Equinox, GMC Terrain and Saab 9-4x multipurpose passenger vehicles, and Chevrolet Cruze passenger cars, do not fully comply with paragraph §19.2.2 of Federal Motor Vehicle Safety Standard (FMVSS) No. 208, *Occupant Crash Protection*. GM has filed an appropriate report pursuant to 49 CFR Part 573, *Defect and Noncompliance Responsibility and Reports*, dated September 6, 2011.

Pursuant to 49 U.S.C. 30118(d) and 30120(h) and the rule implementing those provisions at 49 CFR part 556, GM has petitioned for an exemption from the notification and remedy requirements of 49 U.S.C. Chapter 301 on the basis that this noncompliance is inconsequential to motor vehicle safety. Notice of receipt of GM's petition was published, with a 30-day public comment period, on August 9, 2012, in the Federal Register (77 FR 47697). No comments were received. To view the

petition, the comments, and all supporting documents log onto the Federal Docket Management System (FDMS) website at: <http://www.regulations.gov/>. Then follow the online search instructions to locate docket number "NHTSA-2012-0006."

For further information on this decision, contact Mr. Charles Case, Office of Vehicle Safety Compliance, NHTSA, telephone (202) 366-5319.

VEHICLES INVOLVED: Affected are approximately 3,599 Cadillac SRX, 11,459 Chevrolet Equinox, 5,080 GMC Terrain and 24 Saab 9-4x multipurpose passenger vehicles; and 27,392 Chevrolet Cruze passenger cars, a total of approximately 47,554 vehicles not in compliance with FMVSS No. 208. All of the vehicles are model year 2012 and were manufactured within the period from April 6, 2011 through August 20, 2011.

SUMMARY OF GM'S ANALYSIS AND ARGUMENTS: GM explained that the noncompliance is that on rare occasions, the front passenger air bag suppression status telltale lamp on the subject vehicles may remain illuminated during a particular ignition cycle and indicate that the passenger air bag is OFF regardless of whether the air bag is or is not suppressed.

GM further explains that for this noncompliance condition to exist, the following must occur:

- 1) The engine must be restarted within approximately 24 seconds of having been turned OFF;

- 2) The key¹ must be turned rapidly, spending less than 10 milliseconds (0.01 seconds) in the RUN position before it reaches the START position; and
- 3) The crank power mode (approximately how long the starter motor runs) must be less than 1.2 seconds. GM's data predicts that the conditions for a noncompliance to occur will happen, on average, approximately once every 18 months, independent of whether the front seat is occupied or not.

GM stated its belief that this noncompliance is inconsequential to motor vehicle safety for the following reasons:

- A. The noncompliance does not increase the risk to motor vehicle safety because it has no effect on occupant restraint. The noncompliant condition has absolutely no effect on the proper operation of the occupant classification system. If the telltale error occurs when an occupant or a Child Restraint System (CRS) is in the front passenger seat, the occupant classification system will operate as designed, and will enable or disable the air bag, as intended, and continue to meet the requirements of FMVSS No. 208 in all other regards. As a result, all occupants will continue to receive the benefit of the air bag when they otherwise would, regardless of whether or not

¹ Cadillac SRX and Saab 9-4X vehicles have a push button start/stop switch.

the telltale is operating properly during a particular ignition cycle.

- B. The noncompliance condition is an extremely remote event. The noncompliance condition will not occur unless the engine is shut off and restarted within about 24 seconds. Even then, the condition will not occur unless the ignition key spends less than a hundredth of a second in the RUN position before reaching the START position, and the crank power mode lasts less than 1.2 seconds. These are very prescribed, unusual conditions. GM discovered the condition during an assembly plant end of line audit when it was noted that the telltale illuminated OFF when an adult passenger was present. GM is not aware of any reports in the field about the condition.
- When this condition occurs, it sets a Diagnostic Trouble Code (DTC) that is stored in history in the sensing diagnostic module for 100 ignition cycles. GM reviewed its test fleet experience for the subject vehicles, and determined that the conditions needed to produce the telltale error will occur on average once every 535 days, or approximately, once every 18 months regardless of whether the front passenger seat is occupied or not.
- C. Even if the air bag was enabled when the telltale indicated it was disabled, that would be extremely unlikely to

increase the risk to motor vehicle safety. A potential safety risk could exist if the telltale indicated the air bag was OFF when the air bag was actually ON and a small child or CRS was placed in the front passenger seat. As explained in more detail below, this is extremely unlikely to occur in the present case. Parents and caregivers are warned to properly restrain small children and CRSs in the rear seat, and field data shows small children and CRSs are generally not placed in the front seat. In addition, GM has conducted significant testing to help assure that the air bag suppression system will properly disable the air bag system for small children and CRSs, as designed.

1. Children and CRSs generally are not placed in the front seat. It is very unlikely that a small child or a CRS would be placed in the front seat since parents and caregivers are routinely advised by NHTSA, pediatricians, child safety advocacy groups, and public service messages to properly restrain them in the rear seat. As NHTSA states in its Child Safety Recommendations for All Ages, "All children under 13 should ride in the back seat."

In addition, the label on the vehicle's sun visor warns against placing a rear facing infant seat in the front passenger seat, and the owner's manual

warns against placing children in the front seat, as well, even for vehicles equipped with a passenger sensing system.

Publicly available data confirms that parents and caregivers generally do not place small children in the front passenger seat. According to GM's calculations using National Accident Sampling System (NASS) data, six month old, three year old and six year old children collectively are likely to occupy the front passenger seat during less than one half of one percent of all trips. This fact, together with the infrequency with which the noncompliance condition occurs, makes it extremely unlikely that a child or CRS would be placed in the front seat when the conditions needed to produce the telltale error occur.

2. Even if a small child or CRS was in the front seat. GM has conducted extensive testing to help assure that the air bag suppression system will properly characterize these occupants, so that the air bag will be suppressed, as designed. GM has had significant field experience with suppression systems of the type used in the subject vehicles. GM has used pattern recognition based suppression systems since

2005 and capacitance based suppression systems since 2009.

GM has conducted over 15,000 tests of the suppression systems in the subject vehicles, based on FMVSS 208 as well as GM's own internal requirements, to judge performance for properly positioned as well as out of position occupants and CRSs. In each of the over 10,000 tests involving the systems in the Cruze, Equinox, Terrain and Saab 9-4X vehicles, the suppression system properly characterized the occupant or CRS and enabled or disabled the air bag system, as appropriate. The same is true in the vast majority of SRX tests.

In over 5,000 of GM's SRX tests, the air bag system was enabled or disabled as desired. In just four of GM's internal (non-FMVSS) SRX tests involving three year old dummies in a particular forward facing CRSs, the suppression system enabled the air bag. In each of these tests, the CRS was installed over a 10 mm thick blanket.

These tests have no significant bearing on the present risk analysis, since more than 98 percent of the tests involving a three year old dummy in a forward-facing CRS classified correctly, and in each

of the discrepant tests, the CRS would classify correctly when installed without the blanket.

There was not a single discrepancy in the over 10,000 tests involving the Cruze, Equinox, Terrain and Saab 9-4X vehicles, representing over 92 percent of the subject vehicle population. In addition, in over 99.8 percent of the SRX tests with CRSs or occupants, the air bag system was enabled or disabled, as desired, and in the remainder of the CRS tests, the air bag system was properly suppressed when the CRS was installed according to the CRS manufacturer's instructions.

The very low rate at which the conditions needed to produce the telltale error occur, coupled with the very low chance that a small child or CRS would be located in the front seat at that time, makes the potential for any safety consequence extremely small. That potential is reduced even further since it is extremely unlikely that the noncompliance condition would occur at that same time that a CRS is being installed in the vehicle, for the first time. Anyone who used such a restraint, would in all probability, have received numerous AIR BAG ON telltale illuminations before and after the infrequent

noncompliant OFF illumination, and would have moved the CRS to a rear seating location or modified the installation accordingly.

GM concludes by stating that the telltale error at issue in this petition does not increase the risk to motor vehicle safety because it has no effect on occupant restraint. The air bag classification system will continue to characterize the front seat occupants and enable or disable the air bag, as designed. In addition, the noncompliance condition will rarely occur. For the error to occur at all, the vehicle must be restarted in a very particular manner within less than half of one minute of having been turned off. The conditions needed to produce the telltale error are estimated to occur approximately once every 18 months. The potential for any consequence to result is further reduced by the fact that the front seat is occupied only about a quarter of the time, and by small children and CRSs, much more infrequently. Parental and caregiver education and information in the vehicle owner's manuals and labels warn against placing infants, children and CRSs in the front seat, and NASS data bears out that small children and CRSs are placed in the front less than one percent of the time. More importantly, GM has conducted more than 10,000 tests confirming that the air bag system in over 93 percent of the subject vehicles will properly characterize occupants and CRSs, so that

the air bag will or will not be suppressed, as appropriate. With respect to the remaining vehicles, the air bag system was enabled or disabled, as desired, over 99.8 percent of the time in GM's testing. Even so, the chance that a CRS would be installed in the front seat for the first time, at the same time that the noncompliance occurred, would be even more remote.

GM has additionally informed NHTSA that it has corrected the noncompliance so that all future production vehicles will comply with FMVSS No. 208.

In summation, GM believes that the described noncompliance of its vehicles is inconsequential to motor vehicle safety, and that its petition, to exempt from providing recall notification of noncompliance as required by 49 U.S.C. 30118 and remedying the recall noncompliance as required by 49 U.S.C. 30120 should be granted.

BACKGROUND REQUIREMENTS: Section §19 of FMVSS No. 208 specifically states:

§19 Requirements to provide protection for infants in rear facing and convertible child restraints and car beds.

§19.1 Each vehicle certified as complying with §14 shall, at the option of the manufacturer, meet the requirements specified in §19.2 or §19.3, under the test procedures specified in §20.

§19.2 Option 1—Automatic suppression feature. Each vehicle shall meet the requirements specified in §19.2.1 through §19.2.3. ...

§19.2.2 The vehicle shall be equipped with at least one telltale which emits light whenever the passenger air bag system is deactivated and does not emit light whenever the passenger air bag system is activated, except that the telltale(s) need not illuminate when the passenger seat is unoccupied. Each telltale: ...

(h) The telltale must not emit light except when the passenger air bag is turned off or during a bulb check upon vehicle starting.

NHTSA DECISION: NHTSA has reviewed and accepts GM's analyses that the noncompliance is inconsequential to motor vehicle safety. GM explained that the front passenger classification and air bag suppression system complies with the safety performance requirements of the standard except under a very specific and rare set of conditions that can occur during an ignition cycle and cause the front passenger air bag OFF telltale to remain illuminated. When this occurs, the telltale is the only part of the system affected and the occupant classification system will continue to operate as designed and will enable or disable the air bag as intended. As of May 14, 2013, no consumer complaints related to this condition were received by NHTSA for the subject vehicles.

In consideration of the foregoing, NHTSA has decided that GM met its burden of persuasion that the FMVSS No. 208 noncompliance with respect to the front passenger air bag suppression status telltale lamp described in GM's Noncompliance Information Report is inconsequential to motor vehicle safety.

Accordingly, GM's petition is hereby granted and the GM is exempted from the obligation of providing notification of, and a remedy for, that noncompliance under 49 U.S.C. 30118 and 30120.

NHTSA notes that the statutory provisions (49 U.S.C. 30118(d) and 30120(h)) that permit manufacturers to file petitions for a determination of inconsequentiality allow NHTSA to exempt manufacturers only from the duties found in sections 30118 and 30120, respectively, to notify owners, purchasers, and dealers of a defect or noncompliance and to remedy the defect or noncompliance. Therefore, this decision only applies to the 47,554 subject vehicles that GM determined were noncompliant.

AUTHORITY: 49 U.S.C. 30118, 30120; delegations of authority at 49 CFR 1.95 and 501.8.

ISSUED ON: June 3, 2013

Claude H. Harris, Director
Office of Vehicle Safety Compliance

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